

What is claimed is:

1. A laser resonator comprising:

a pair of reflection portions provided such as to allow a laser beam to oscillate therebetween;

a laser medium provided on the optical path of the laser between said pair of reflection portions;

an excitation portion for exciting said laser medium;

an optical system provided on the optical path of said laser beam between said laser medium and said pair of reflection portions for changing the state of the laser in said laser medium; and

a movement portion for moving said optical system along the optical axis of the laser.
2. A laser resonator in accordance with claim 1, wherein said optical system comprises a pair of optical elements provided at positions on opposite sides of the laser medium on the optical path of the laser beam between said laser medium and said pair of reflection portions.
3. A laser resonator in accordance with claim 1, wherein said excitation portion is an excitation laser device for directing an excitation laser beam onto said laser medium.
4. A laser resonator in accordance with claim 3, wherein a dichroic mirror used for directing the excitation laser beam onto said laser medium along an optical axis roughly

overlapping said laser beam is provided at least between said laser medium and said optical system.

5. A method for adjusting a laser resonator according to claim 1, comprising moving said optical system along the optical axis of said laser beam to change the state of the laser beam inside said laser medium.